PRIOR ART

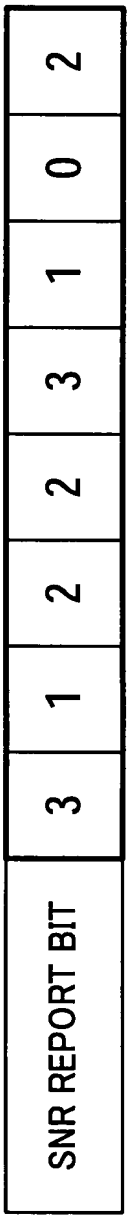

FIG.1

PRIOR ART

SNR REPORT BIT	MODULATION SCHEME
0	NOT TRANSMITTED
1	QPSK
2	16QAM
3	64QAM

FIG.2

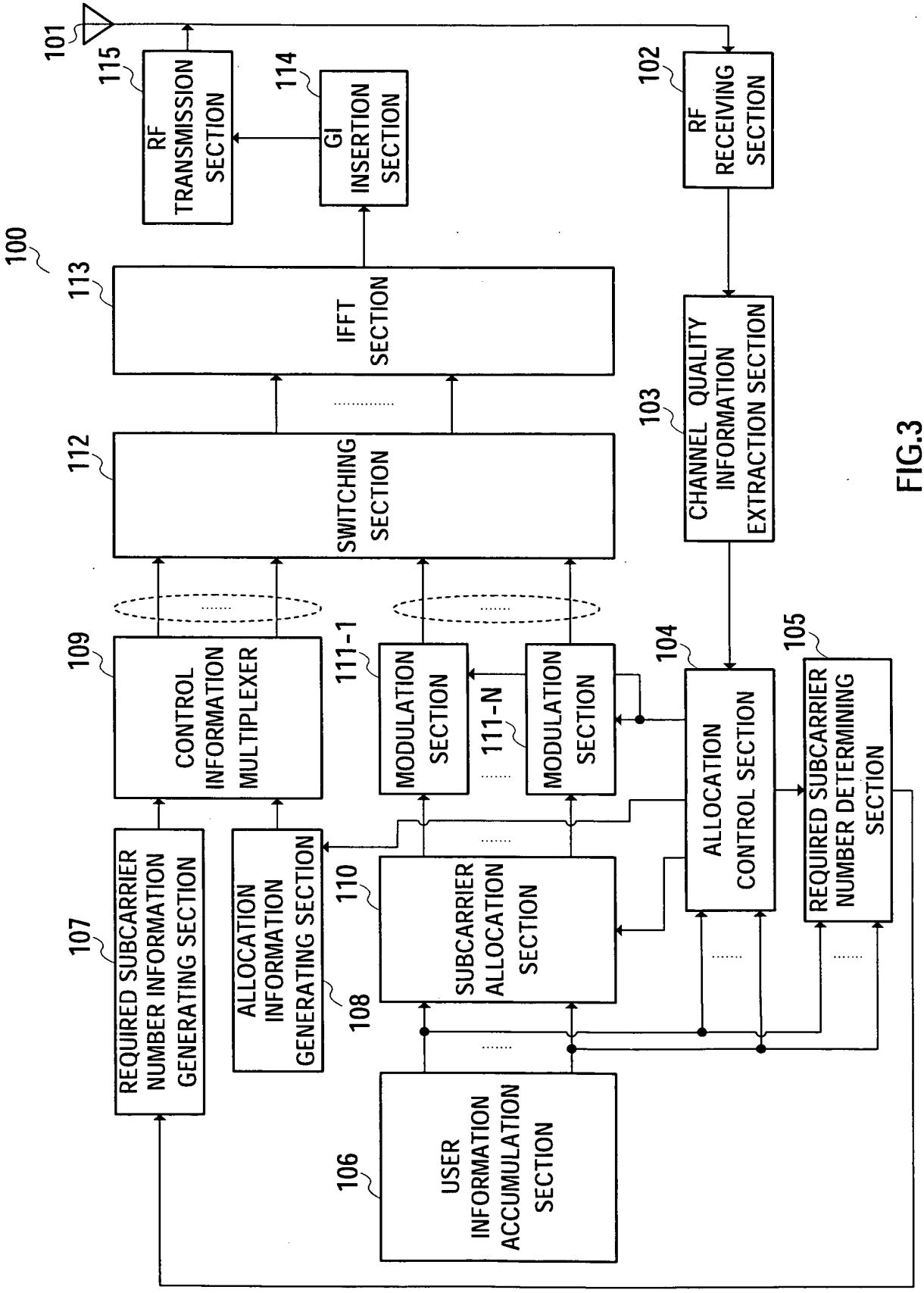
100
101
102 RF RECEIVING SECTION
103 CHANNEL QUALITY INFORMATION EXTRACTION SECTION
104 ALLOCATION CONTROL SECTION
105 REQUIRED SUBCARRIER NUMBER DETERMINING SECTION
106 USER INFORMATION ACCUMULATION SECTION
107 REQUIRED SUBCARRIER NUMBER INFORMATION GENERATING SECTION
108 ALLOCATION INFORMATION GENERATING SECTION
109 CONTROL INFORMATION MULTIPLEXER
110 SUBCARRIER ALLOCATION SECTION
111-1 MODULATION SECTION
111-N MODULATION SECTION
112 SWITCHING SECTION
113 IFFT SECTION
114 GI INSERTION SECTION
115 RF TRANSMISSION SECTION

FIG.3

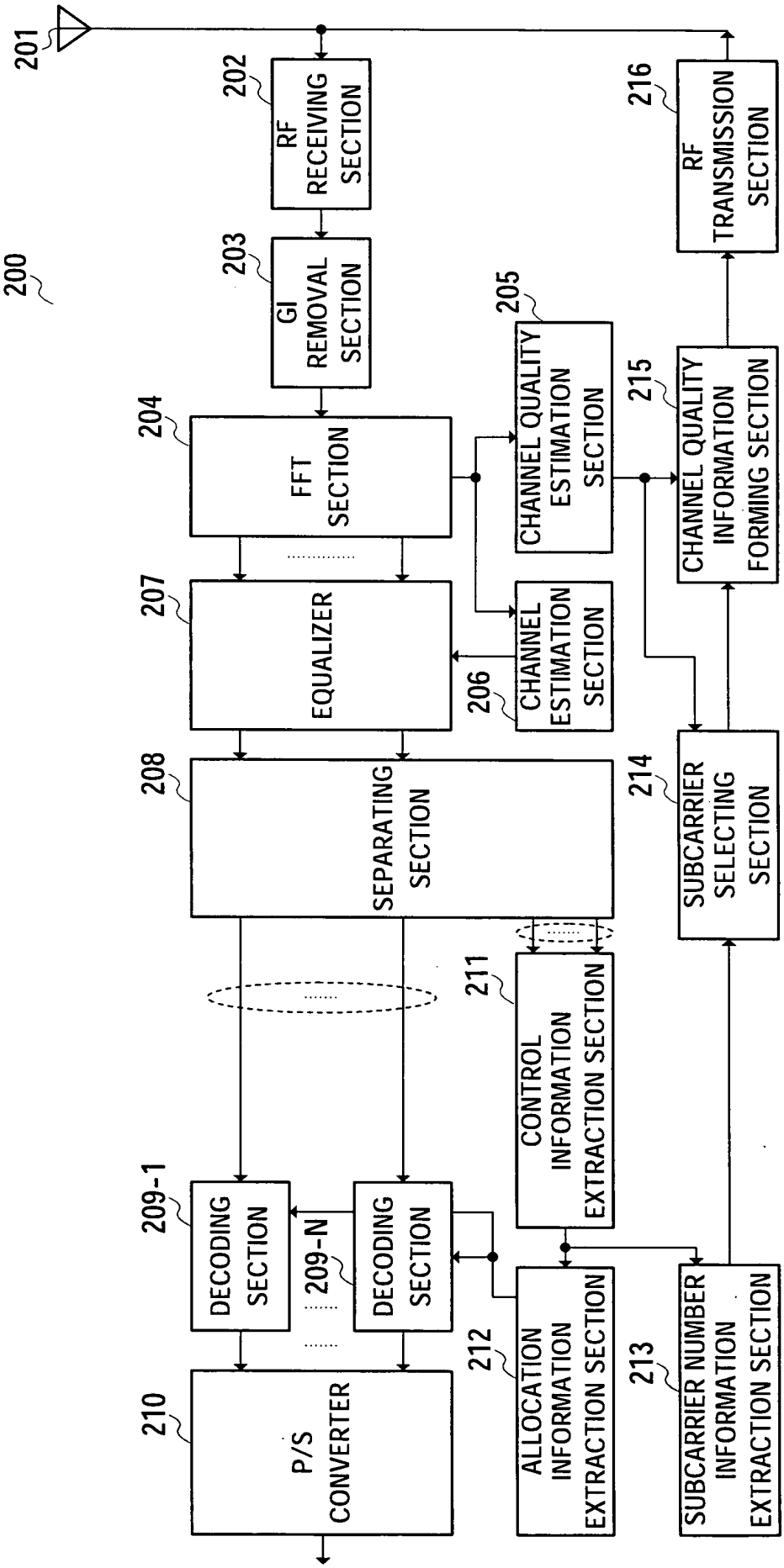
200
201
202
RF RECEIVING SECTION
203
GI REMOVAL SECTION
204
FFT SECTION
205
CHANNEL QUALITY ESTIMATION SECTION
206
CHANNEL ESTIMATION SECTION
207
EQUALIZER
208
SEPARATING SECTION
209-1
DECODING SECTION
209-N
DECODING SECTION
210
P/S CONVERTER
211
CONTROL INFORMATION EXTRACTION SECTION
212
ALLOCATION INFORMATION EXTRACTION SECTION
213
SUBCARRIER NUMBER INFORMATION EXTRACTION SECTION
214
SUBCARRIER SELECTING SECTION
215
CHANNEL QUALITY INFORMATION FORMING SECTION
216
RF TRANSMISSION SECTION

FIG.4

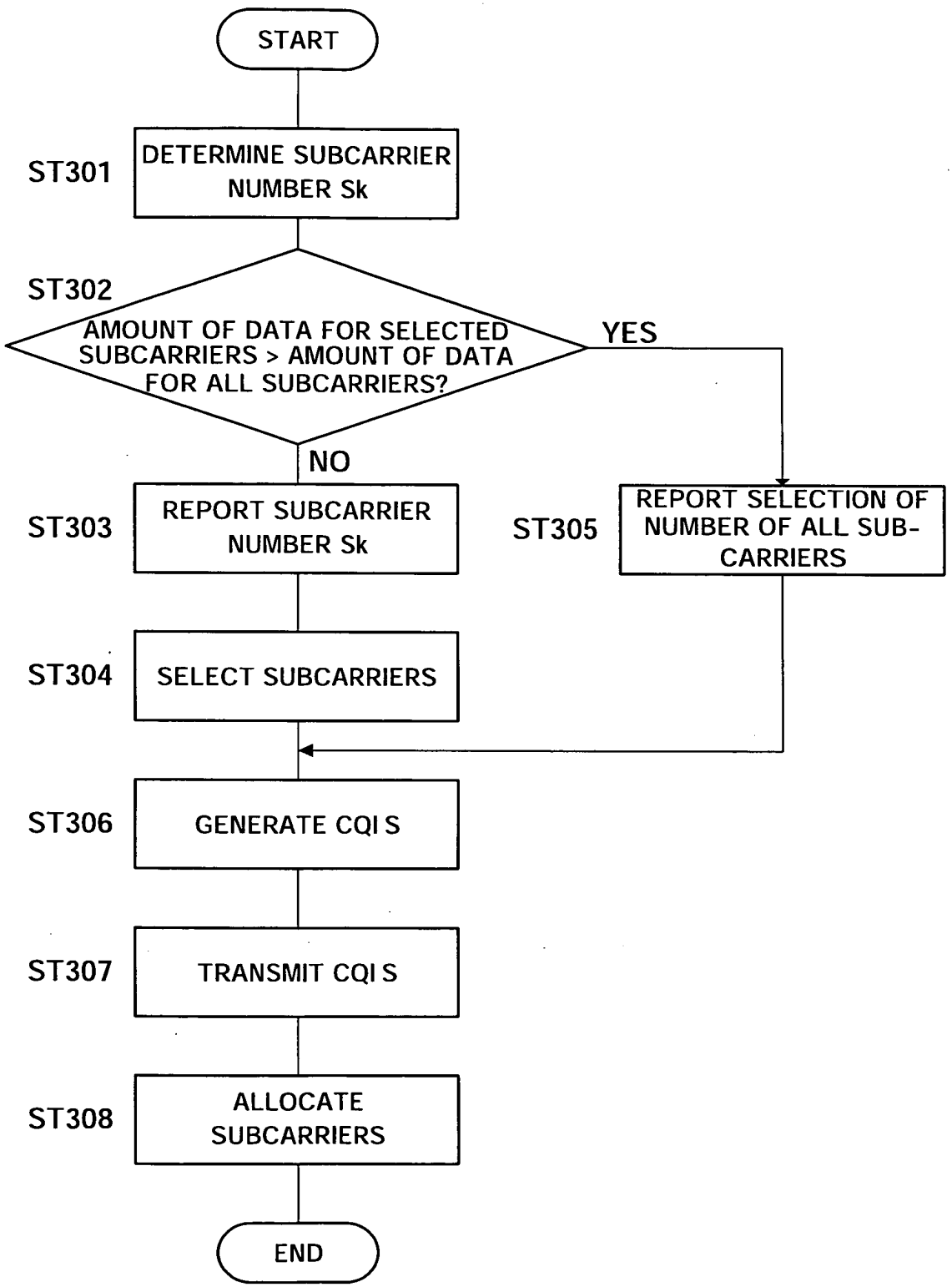
START
ST301
DETERMINE SUBCARRIER NUMBER Sk
ST302
AMOUNT OF DATA FOR SELECTED SUBCARRIERS > AMOUNT OF DATA FOR ALL SUBCARRIERS?
YES
NO
ST303
REPORT SUBCARRIER NUMBER Sk
ST305
REPORT SELECTION OF NUMBER OF ALL SUB-CARRIERS
ST304
SELECT SUBCARRIERS
ST306
GENERATE CQI S
ST307
TRANSMIT CQI S
ST308
ALLOCATE SUBCARRIERS
END

FIG.5

SNR REPORT BIT	3	3
SUBCARRIER NUMBER INFORMATION	0	4

FIG.6

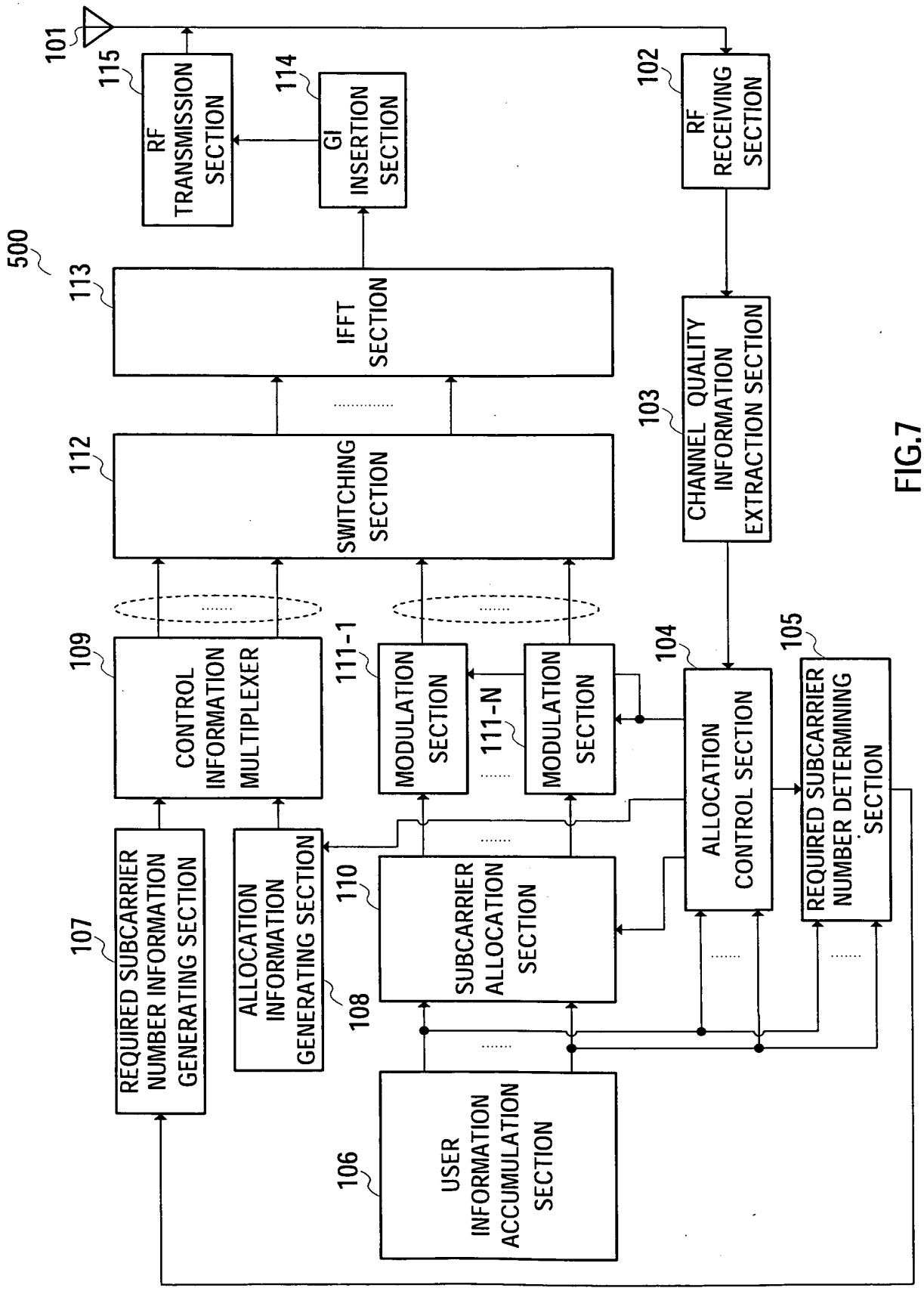
500
101
115
RF TRANSMISSION SECTION
114
GI INSERTION SECTION
102
RF RECEIVING SECTION
113
IFFT SECTION
112
SWITCHING SECTION
103
CHANNEL QUALITY INFORMATION EXTRACTION SECTION
109
CONTROL INFORMATION MULTIPLEXER
111-1
MODULATION SECTION
111-N
MODULATION SECTION
104
ALLOCATION CONTROL SECTION
105
REQUIRED SUBCARRIER NUMBER DETERMINING SECTION
107
REQUIRED SUBCARRIER NUMBER INFORMATION GENERATING SECTION
108
ALLOCATION INFORMATION GENERATING SECTION
110
SUBCARRIER ALLOCATION SECTION
106
USER INFORMATION ACCUMULATION SECTION

FIG.7

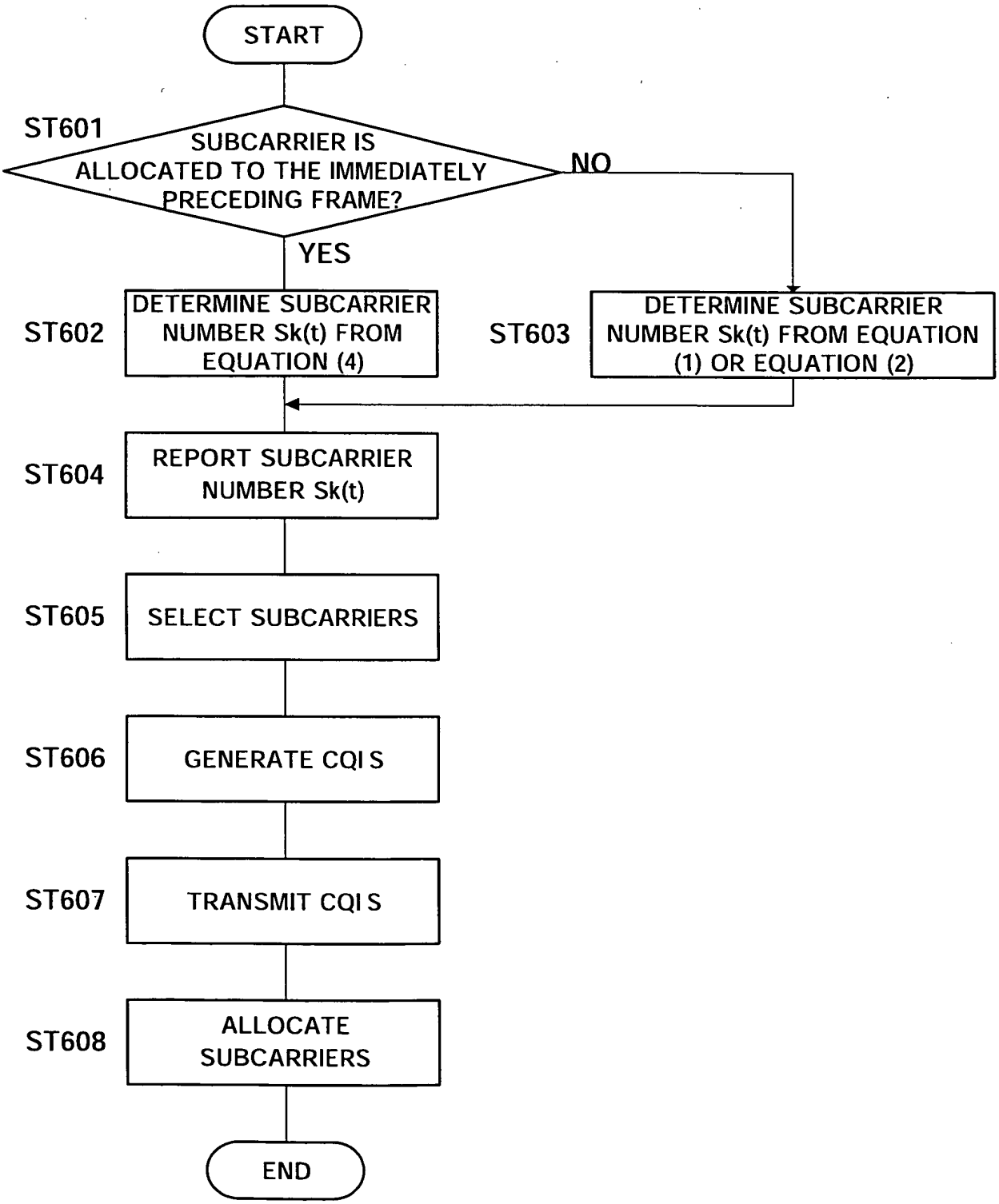
START
ST601
SUBCARRIER IS ALLOCATED TO THE IMMEDIATELY PRECEDING FRAME?
NO
YES
ST602
DETERMINE SUBCARRIER NUMBER Sk(t) FROM EQUATION (4)
ST603
DETERMINE SUBCARRIER NUMBER Sk(t) FROM EQUATION (1) OR EQUATION (2)
ST604
REPORT SUBCARRIER NUMBER Sk(t)
ST605
SELECT SUBCARRIERS
ST606
GENERATE CQI S
ST607
TRANSMIT CQI S
ST608
ALLOCATE SUBCARRIERS
END

FIG.8